Filing Date: June 29, 2001

Title: METHOD AND APPARATUS FOR DISSIPATING HEAT FROM AN ELECTRONIC DEVICE

Assignee: Intel Corporation

IN THE CLAIMS

Please amend the claims as follows.

1. (Previously Presented) An apparatus for dissipating heat from an electronic device, the apparatus comprising:

an evaporator thermally connected to the electronic device to receive thermal energy from the electronic device;

a condenser connected to the evaporator;

a coolant cycling between the evaporator where liquid coolant is evaporated to facilitate cooling the electronic device and the condenser where vaporized coolant is condensed into a liquid for subsequent evaporation;

a heater positioned to supply thermal energy to the coolant; and

a pump to transfer the coolant from the condenser to the evaporator.

2. (Cancelled)

- 3. (Original) The apparatus of claim 1 further comprising an interface thermally connected to the evaporator to transfer thermal energy from the electronic device to the evaporator.
- 4. (Original) The apparatus of claim 1 further comprising one or more flexible conduits connected to the evaporator and the condenser to transport the coolant between the evaporator and the condenser.
- 5. (Original) The apparatus of claim 1 wherein the evaporator is a wicked evaporator.
- 6. (Original) The apparatus of claim 1 wherein the heater is a resistive coil heater.

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7. (Original) The apparatus of claim 1 wherein the apparatus is a closed system having an interior volume and the liquid coolant initially occupies more than 90 percent of the interior volume.

8. (Original) The apparatus of claim 7 wherein the closed system comprises only liquid and vapor coolant.

9-11. (Cancelled)

12. (Previously Presented) An apparatus for removing thermal energy from an electronic device, the apparatus comprising:

an evaporator thermally coupled to the electronic device to receive thermal energy from the electronic device;

a condenser;

a conduit that provides a closed fluid path between the evaporator and condenser;

a liquid coolant within the fluid path;

a heater constructed and arranged to supply thermal energy to the liquid coolant;

a pump to transfer the liquid coolant from the condenser to the evaporator; and

a control connected to the heater to maintain the liquid coolant at an optimum

temperature for evaporation by the evaporator.

13. (Previously Presented) The apparatus of claim 12 wherein the evaporator, condenser, pump and conduit define a closed system having an interior volume such that the liquid coolant initially occupies more than 90 percent of the interior volume.

14. (Original) The apparatus of claim 12 wherein at least a portion of the conduit is flexible.

15-30. (Cancelled)

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31. (New) An apparatus for removing thermal energy from an electronic device, the apparatus comprising:

an evaporator thermally coupled to the electronic device to receive thermal energy from the electronic device;

- a condenser;
- a conduit that provides a closed fluid path between the evaporator and condenser;
- a liquid coolant within the fluid path;
- a heater constructed and arranged to supply thermal energy to the liquid coolant; and
- a pump to transfer the liquid coolant from the condenser to the evaporator.
- 32. (New) The apparatus of claim 31 further comprising an interface thermally connected to the evaporator to transfer thermal energy from the electronic device to the evaporator.
- 33. (New) The apparatus of claim 31 wherein the conduit is a flexible conduit that is connected to the evaporator and the condenser to transport the liquid coolant between the condenser and the evaporator.
- 34. (New) The apparatus of claim 31 wherein the evaporator is a wicked evaporator.
- 35. (New) The apparatus of claim 31 wherein the heater is a resistive coil heater.
- 36. (New) The apparatus of claim 31 wherein the apparatus is a closed system having an interior volume and the liquid coolant initially occupies more than 90 percent of the interior volume.
- 37. (New) The apparatus of claim 31 further comprising a control connected to the heater to maintain the liquid coolant at an optimum temperature for evaporation by the evaporator.
- 38. (New) The apparatus of claim 12 further comprising an interface thermally connected to the evaporator to transfer thermal energy from the electronic device to the evaporator.

AMENDMENT UNDER 37 C.F.R. 1.116 – EXPEDITED PROCEDURE

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39. (New) The apparatus of claim 12 wherein the conduit is a flexible conduit that is connected to the evaporator and the condenser to transport the liquid coolant between the condenser and the evaporator.

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40. (New) The apparatus of claim 12 wherein the apparatus is a closed system having an interior volume and the liquid coolant initially occupies more than 90 percent of the interior volume.